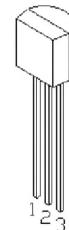


- \* Driven directly with IC and MOS device.
- \* Feature proprietary, void-free glass passivated chips.
- \* Available in voltage ratings from 100 to 600 volts  
( VDRM and VRRM)
- \* Sensitive gate trigger current.
- \* Designed for high volume, line-powered control application  
in relay lamp drivers, small motor controls, gate drivers for  
large thyristors.

TO-92



Pin 1 : Cathode

Pin 2 : Anode

Pin 3 : Gate

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	DEVICE NUMBERS		UNITS
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage and Tc=125°C	VDRM & VRRM	MCR100-4A MCR100-6A MCR100-8A	200 400 600	V V V
RMS On-State Current at Tc=50°C and Conduction Angle of 180°	IT (RMS)		0.8	A
Peak Surge (Non-Repetitive) On-State Current, One-Cycle, at 50Hz or 60Hz	ITSM		8	A
Peak Gate-Trigger Current for 3μ sec. Max.	IGTM		0.8	A
Peak Gate-Power Dissipation at IGT ≤ or = IGTM	PGM		5	W
Average Gate-Power Dissipation	PG(AV)		0.2	W
Peak Off-State Current (1) Tc=25°C VDRM & VRRM = Max. Rating Tc=125°C	IDRM & IRRM		10 200	μA MAX
Maximum On-State Voltage. (Peak) at Tc=25°C and IT= Rated Amps	VTM		1.7	V MAX
DC Holding Current, (1) Tc=25°C	IHO		5	mA MAX
Critical Rate-Of-Rise of Off-State Voltage. (1) Gate Open, Tc=110°C	Critical dv/dt		5	V/μ sec
DC Gate-Trigger Current for Anode Voltage = 7V DC, RL = 100 ohm and at Tc=25°C	IGT		200	μA MAX
Storage Temperature Range	Tstg		-40 to +150	°C
Operating Temperature Range, Tj	Toper		-40 to +110	°C
DC Gate-Trigger Voltage for Anode Voltage = 7V DC RL=100ohm and at Tc=25°C	VGT		0.8	V MAX
Gate-Controlled Turn-on Time tD+tR IGT=10mA and Tc=25°C	Tgt		2.2	μ sec
Thermal Resistance, Junction-to-Case	Rθ J-C		75	°C/W TYP

(1) RG-K = 1K ohm



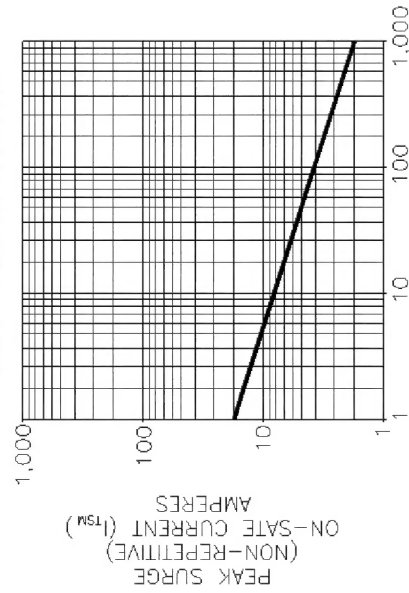
MICRO ELECTRONICS LTD.

38, Hung To Road, Microtron Building, Kwun Tong, Kowloon, Hong Kong.

Kwun Tong P.O. Box 69477 Hong Kong. Fax No. 2341 0321 Telex:43510 Micro Hx. Tel: 2343 0181-5

# MCR100-4A 6A 8A

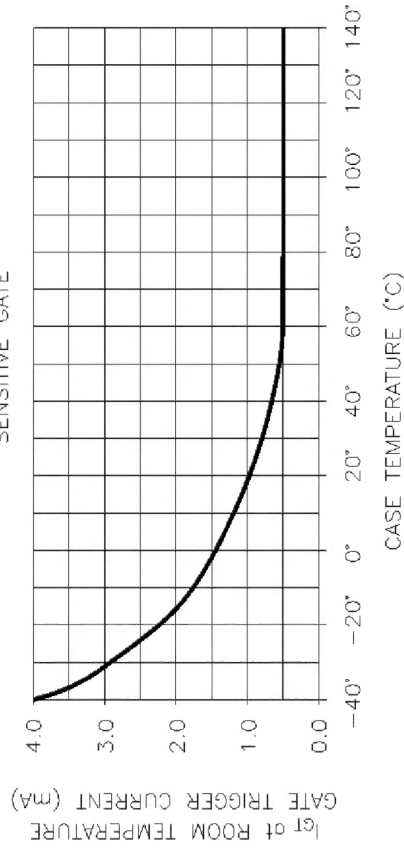
PEAK SURGE ON-STATE CURRENT  
VS  
SURGE CURRENT DURATION



PEAK SURGE  
(NON-REPETITIVE)  
ON-STATE CURRENT ( $I_{TSM}$ )  
AMPERES

SURGE CURRENT DURATION,  
FULL CYCLES at 60Hz  
CURRENT WAVEFORM :  
SINUSOIDAL, 60Hz  
RESISTIVE LOAD

TYPICAL GATE CURRENT  
VS  
CASE TEMPERATURE  
SENSITIVE GATE



Gate Trigger Current (mA)  
at Room Temperature

CASE TEMPERATURE (°C)

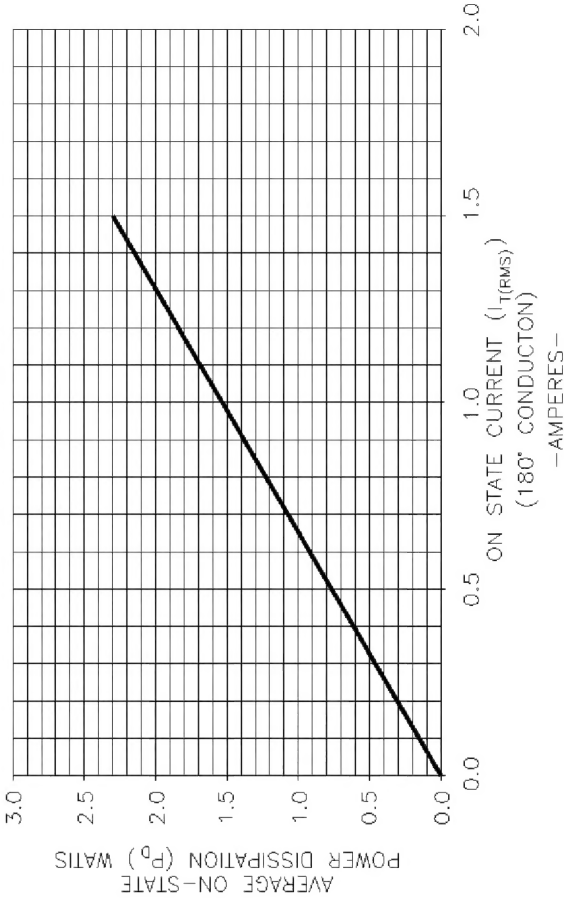
MAXIMUM ALLOWABLE CASE TEMPERATURE  
VS  
ON-STATE CURRENT



MAXIMUM ALLOWABLE  
CASE TEMPERATURE ( $T_c$ ) °C

1. MEASURED AT HOTTEST POINT
2. WAVEFORM : SINUSOIDAL,  
50Hz to 60Hz 140°
3. 180° CONDUCTION

MAXIMUM CONDUCTION POWER DISSIPATION  
VS  
ON-STATE CURRENT



AVERAGE ON-STATE  
POWER DISSIPATION ( $P_D$ ) WATTS

ON-STATE CURRENT ( $I_{T(RMS)}$ ) AMPERES